6-17-99

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

HDodohara:hd/OPPT-NPCD-FOB/6-17-99/7404/260-3959/Rm ET837/"amend99.R&D.wpd"
FOB Chron:Reading File/DS File/Subject File
amendment, clarify, R&D approval, concrete cleaning, biodegradation

Mr. John D. Rind, Sr. Staff Environ. Engr.
Alcoa Technical Center
Aluminum Company of America
100 Technical Drive
Alcoa Center, Pennsylvania 15069-0001

Dear Mr. Rind:

Your letter of June 1, 1999 requests clarification and confirmation by letter of the various conditions in the Research and Development (R&D) Approval of June 1, 1999 issued to the Alcoa Technical Center. The National Program Chemicals Division (NPCD) of the U.S. Environmental Protection Agency (EPA) amends the Alcoa R&D approval to respond to Alcoa's concerns. Enclosed are pages five and six revised to clarify and to confirm the following issue addressed in your letter. Revised items are inserted in **bold** text. Please replace the enclosed pages appropriately.

Condition 3, Feedstock Restrictions:

- PCB Concentration: On February 28, 1994, NPCD amended the Alcoa R&D Approval to increase the allowed PCB concentration in soil/sludge from 2,000 ppm to 10,000 ppm for biodegradation studies. The condition of approval is amended to allow 10,000 ppm PCBs in the feedstock. In addition, the PCB concentration limit for concrete floor core samples is established at 11,000 ppm.

- Material Limitation: NPCD limited the quantity of concrete floor core samples for the studies to that quantity requested by Alcoa (500 lb.). However, the PCB regulations do allow up to 70 cubic feet of non-liquid PCB to be tested. Condition 3 is amended to allow 70 cubic feet of concrete floor core samples for each study.

- Source of Study Material: NPCD confirms the scope of work for Alcoa's biodegradation studies to include PCB-contaminated soil, sludge, water and /or oil samples from sites owned by Alcoa or its subsidiaries, or from public bodies of water adjacent or downstream of Alcoa properties.

CONCURRENCES							
SYMBOL	7404						
SURNAME	Dodohara						
DATE	6/17/99						

EPA Form 1320-1A (1/90) OFFICIAL FILE COPY

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Condition 6, R&D Test Report:

- Alcoa shall submit a formal final test report within 90 days after the completion date of studies applied to the major project scope; or whenever the R&D approval expires. Alcoa shall also submit annually on the anniversary of the R&D approval short, executive summary of studies included with Alcoa's request for permit renewal.

Please direct matters concerning this subject to Hiroshi Dodohara of my staff at (202) 260-3959.

Sincerely,

John W. Melone, Director
National Program Chemicals Division

Enclosure

cc:
Ed Cohen
Region III

David Greenlaw
Region II

first two weeks after completion of cleaning, and at intervals of about two weeks thereafter for a period of three months. Hexane extracts of these samples will be analyzed as a measure of the total amount of oil present.

Conditions of Approval

1. Advance Notification: A thirty-day advance notice of the proposed tests must be provided to the Regional Administrator of EPA Region III, the state of Pennsylvania, and any local officials governing the site where the ALCOA Technical Center is located, and to the EPA Regional Offices, the state and local agencies where the sampling sites are located. These notices must briefly outline the treatability testing program, and include the approximate dates of the testing and the estimated length of the testing. A sample form is enclosed. Copies of these letters must be sent to the Chief, Fibers and Organic Branch (7404) at EPA Headquarters to be kept on file.

2. Other Permits and Approvals: Prior to commencing the tests, ALCOA must obtain any necessary Federal, state or local permits or approvals. During the course of the testing, ALCOA shall comply with all conditions and requirements of such permits or approvals.

3. Feedstock and Restrictions:

a. Biodegradation Research : PCB- contaminated soil, sludge, water and/or oil samples used in these treatability studies will be obtained from PCB-contaminated sites owned by ALCOA or its subsidiaries that are located within the continental United States or its territories, **and from public bodies of water, adjacent to or downstream of Alcoa properties.**. For any one project, a maximum of approximately 150 pounds of soil and/or sludge ranging in concentration from 10 ppm to **10,000** ppm PCBs may be used. For any one project, a maximum of 100 gallons of water ranging in concentration from 1 ppb to 100 ppm PCBs may be used. For any one project, a maximum of two liters of oil ranging in concentration from 10 ppm to 5,000 ppm PCBs may be used.

Solid and liquid waste matrices used in the treatability studies will be sampled and analyzed for PCBs with Gas Chromatography and/or Mass Spectrometry at the beginning of the studies and at intervals for the duration of the studies until the treatment has reduced the concentration of PCB's to less than 3 parts per billion for water; 2 ppm per peak for soils, sediments and sludges; and 10 micrograms per 100 square centimeters for non-porous surfaces. While these levels cited for the various media refer to TSCA cleanup levels, part of the treatability testing is to test various biodegradation approaches and enhancements that may not meet the cleanup levels cited. Regardless of whether the cleanup levels are attained or not, all material used in the studies, both treated and untreated, will be incinerated in a TSCA- approved incinerator when the studies are completed.

b. Contaminated Concrete Research: Alcoa will be limited to **70 cubic feet** of concrete contaminated with **no greater than 11, 000 ppm** PCBs. Core samples for treatment will be 8 inches in diameter and 5 - 8 inches long and core samples for characterization will be 2 inches in

diameter and 5 - 8 inches long. Alcoa may request, with justification, to treat additional concrete core samples from Vernon, CA, Massena, NY or from other facilities. This approval applies to other Alcoa facilities, subject to notification to EPA of intent to perform R&D studies and to submission of EPA I.D. numbers for the other Alcoa facilities.

4. Process Waste Restrictions: All waste generated as a result of this process must be disposed of as if it contained the original concentration of the feedstock received at the ALCOA Technical Center from off-site ALCOA locations, unless through representative sampling and analysis, EPA can verify that the waste contains non-detectable concentrations of PCBs (defined as less than 2 parts per million per congener quantitated with the Dye Color Manufacturers Association [DCMA] Standard for all matrices except water, which must contain less than 3 parts per billion total).

This approval does not obligate EPA to take samples. In the event that EPA does not take samples, all PCB waste and treated residues generated during the test(s) must be disposed of by approved TSCA incineration according to 40 CFR 761.70 or by chemical waste landfilling according to 40 CFR 761.75.

5. Process Monitoring/Recordkeeping: Plans for sampling and analysis and quality assurance are described in ALCOA's permit application on file at EPA Headquarters. Sampling and analysis will be conducted on all PCB- contaminated solid and liquid matrices used in this R&D project to establish baseline conditions and subsequently to monitor various parameters during the project.

For the biodegradation studies, the results of all sampling, analytical, and monitoring activities must be recorded throughout the R&D activity. The results include the following:

a. initial PCB concentration of all samples of solid and liquid matrices analyzed;

b. final PCB concentration of all samples of solid and liquid matrices analyzed;

c. rate(s) of PCB degradation monitored in study samples;

d. the PCB concentration of any air samples analyzed to measure potential PCB losses through volatilization;

e. any initial and final toxicity tests; and

f. specific partition coefficients between soil/sludge and water, and between oil and water.

6. R&D Test Report: **Alcoa shall submit a formal final test report no later than 90 days after the completion date of studies applied to the major project scope; or after the expira-tion date of the permit, whichever comes first. Alcoa shall also submit annually on the anniversary of the R&D approval, short, executive summaries of its studies, to be included with Alcoa's request for permit renewal.** All test results and related information on this R&D project shall be

Aluminum Company of America
Alcoa Technical Center

ALCOA

1999 June 03

Mr. Hiroshi Dodohara
Office of Toxic Substances
U.S. Environmental Protection Agency
Washington D.C. 20460

Certified Mail

Re: June 1, 1999 Approval to Conduct R&D Tests to Dispose of PCBs

Dear Mr. Dodohara:

Thank you for assisting with the issuance of the EPA approval for Alcoa Technical Center to conduct additional studies to determine the effectiveness of cleaning and coating techniques for PCB contaminated concrete from Alcoa's Massena Operations.

ATC would like to confirm the following issues related to the Conditions of Approval section of the June 1, 1999 Approval:

- **Section 3. Feedstock and Restrictions, PCB Concentrations:** In ATC's original approval, dated Aug 18, 1993, the maximum concentration of PCBs in soil and sludge was 2,000 ppm. This limit was subsequently amended to increase the maximum PCB concentration in soil/sludge from 2,000 ppm to 10,000 ppm by a letter dated Feb 28, 1994. (See attached.) However, in the most recent amendment of this approval, dated June 1, 1999, the maximum concentration was again 2,000 ppm. Please confirm by letter that Alcoa Technical Center is approved to conduct treatability studies on soil and/or sludge with maximum PCB concentrations up to 10,000 ppm and approved to conduct cleaning and coating research on concrete core samples up to 11,000 ppm.

- **Section 3. Feedstock and Restrictions, Material limitations:** ATC understands that the approval to treat additional concrete core samples from Vernon, CA, Massena, New York, or from other facilities is limited to "500 gallons of PCB liquids or 70 cubic feet of PCB solids, or a total of 500 gallons of a mixture of PCB liquid and solids". With this major project limitation in place, is it necessary to limit each particular project to 500 pounds or can ATC limit the collective total of all projects to 70 cubic feet of PCB solids to facilitate flexibility in sample collection and processing. Please confirm.

- **Section 3. Feedstock and Restrictions, Sources of Study Materials:** Past correspondence from Alcoa to EPA describing the scope of work and/or 30-day notification for the Biodegradation Research noted that the feedstock could include PCB-contaminated soil, sludge, water and/or oil samples obtained from PCB-contaminated sites owned by Alcoa, or its subsidiaries, or from public bodies of water located adjacent or downstream from Alcoa properties, (i.e. Grasse River, NY, sediment samples). The June 1, 1999 approval does not

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address biodegradation study material from public bodies of water located adjacent or downstream from Alcoa properties, but this is still a necessary component of the Biodegradation Research. Please confirm.

- **Section 6. R&D Test Report:** ATC understood from past conversations with your office that the requirement to submit a test report for each project no later than 90 days after the completion date of testing applied to the major project scope, Biodegradation studies and Contaminated Concrete studies, not the individual projects within the permit (i.e. Vernon, CA concrete studies vs. Massena, NY concrete studies). Please confirm.

Thatcher Montgomery, the previous environmental contact for Alcoa Technical Center, has taken another position. I will be the new Alcoa Technical Center contact for your office. Please contact me at (724) 337-5739 with any questions.

Thank you again for your assistance.

Sincerely,

John D. Rind
Sr. Staff Environmental Engineer
Alcoa Technical Center

cc:
S. W. Harvey, ACC
R. M. Tomicek, ACC
J. A. Lease/D. A. Ferrante /Solid Waste-PCB File
J. R. Smith, ATC-C-ESTD
M. E. Tabe, ATC-C-ESTD

ROUTING SLIP

		DRAFT REVIEW		FINAL REVIEW		
#	NAME	INITIAL	DATE	ACTION	INITIAL	DATE
1	John Smith			FYI		
2	Tony Baney	TB	6/14	Concur	TB	6/24
3	Pat Miller			Login		
4	John Melone			Sign		
5	Pat Miller			Logout		
6						
7						
8						
9						

Nature of Item Being Routed:

Amendment for the Alcoa R&D permit clarifying quantities and concentration of PCB contaminated feedstock for the studies, source of the feedstock and nature of test reports required by the permit.

FROM:			DATE	TELE #	ROOM #
H. Dodohara			6/10/99	260-3959	ET-837